

## BUILDING INSPECTOR CERTIFICATION

February 2004

See <http://www.commerce.state.wi.us/SB/SB-UDCProgram.html>  
and <http://www.commerce.state.wi.us/SB/SB-CredentialProgram.html>

**Scope:** This information is only regarding certification of inspectors for **building** codes administered by the Safety and Buildings Division (S&B). Contact 608-261-8500 for information on other inspector certification programs.

S&B certifies inspectors for minimum technical competency only. Local municipalities and others use standard personnel evaluation practices when selecting S&B-certified inspectors.

S&B has lists of certified inspectors available on the Internet,  
<http://www.commerce.state.wi.us/SB/SB-CredList.html>.

S&B does **not** certify "home inspectors" or similar occupations involved in privately reporting the condition of a building to a prospective buyer or related party. Contact the Wisconsin Department of Regulation and Licensing at 608-266-5511 for information on home inspection.

**Categories:** S&B certifies building inspectors for the following codes in the indicated categories.

- **The Uniform Dwelling Code (UDC)** covers all one- and two-family dwellings constructed since June 1, 1980. UDC inspectors also enforce these other codes: Comm 20-25; state Electrical Code, Comm 16; state Plumbing Code, Comm 82-86; and Licenses, Certifications and Registrations Code, Comm 5.. (Older dwellings would only be subject to any local codes.) Any person reviewing plans of, or inspecting one- and two-family dwellings constructed since June 1, 1980, for any municipality, a state inspection agency, or a manufacturer's inspection agency, must be state-certified, including inspectors in municipalities of fewer than 2500 population. Under the UDC, there are four categories of certification, covering the indicated code chapters:
  - **UDC-Construction** (including erosion control) - Comm 20, 21, and 22, and UDC Appendix
  - **UDC-Heating, Ventilating And Air Conditioning (HVAC)** - Comm 20, 22, and 23, and UDC Appendix
  - **UDC-Electrical** - Comm 20, 24, and 16, and the adopted National Electrical Code (NEC)-2002 Edition. The applicable provisions include the one- and two-family and less than 600 volt portions of the code.
  - **UDC-Plumbing** (interior plumbing) - Comm 20, 25, 82, and 84 and Wisconsin statutes Chapter 145

The building envelope requirements of Comm 22 are covered by the UDC-Construction exam. The heating, ventilation and cooling requirements of Comm 22 are covered by the UDC-HVAC exam. Both exams require the ability to review the UDC Energy Worksheet for compliance. A completed sample worksheet is in the UDC-Appendix.

S&B also administers an erosion control certification under the UDC, for people who attended approved erosion control training. (Otherwise it is necessary to become certified by exam in the UDC-Construction category).

To contract with the state or individuals to provide UDC inspection services where there is no municipal or county UDC enforcement program, individuals will also need to be certified as a UDC Inspection Agency. There is no examination necessary.

(Note that it is required that a city of the first, second, or third class have a plumbing inspector who is also a licensed journeyman or master plumber. This would typically be in a city of over 10,000 population.)

- **POWTS Code**, Comm 82-86, and Wisconsin state Stats 145, as are enforced as they apply to private onsite wastewater systems (POWTS). The POWTS code, Comm 83, is enforced by inspectors who are typically county employees, except in Milwaukee County. In addition to the Comm 83 codebook, POWTS inspectors need to be aware of the POWTS Component Manuals. Comm 5, Licenses, Certifications, and Registrations, covers inspector certification.
- **Wisconsin Commercial Building Code**, Comm 61-65, covers the construction of commercial and apartment buildings. Only inspectors that enforce the WCBC for a commercially-certified municipality or a manufacturer's inspection agency must be certified in the commercial building category. Comm 5, Licenses, Certifications, and Registrations, covers inspector certification.

Wisconsin adopts large portions of several of the 2000 International Code Council (ICC) model codes to apply to commercial and multi-family dwellings. In order to prepare for the Commercial Building Inspector exam, interested parties may obtain an Enrolled Wisconsin Commercial Building Code,, which contains the Wisconsin code and the adopted portions of the model codes. In addition to the enrolled code, a WCBC inspector needs the ANSI A117.1/1998 Guidelines for Accessible and Usable Buildings & Facilities. Info on obtaining the Enrolled Code is online, <http://www.commerce.state.wi.us/SB/SB-DivCodes.html>

- **Rental Weatherization Program**, Comm 67 at times requires energy conservation inspections when residential rental property ownership is transferred. Comm 67 is enforced by state-certified independent inspectors who are contracted by building owners to conduct inspections. The exam involves Comm 67 and also covers Rental Weatherization Code Commentary material. Comm 5, Licenses, Certifications, and Registrations, covers inspector certification.
- **The state and National Electrical Codes** as they apply to commercial and apartment buildings (Commercial Electrical) are Comm 16 and NEC-2002. Any person enforcing the electrical code for new installations in such buildings must be state-certified. In order to qualify to take the exam, you must have six years of electrical-related experience, some of which may be substituted with education. Comm 5, Licenses, Certifications, and Registrations, covers inspector certification.

**Certification Requirements:** Inspector certification is accomplished through S&B exams. All examinations are independent of each other, so they may be taken in any order. There is **no** grace period during which a newly-hired or -appointed inspector may inspect without being properly certified.

**Exam Preparation:** Preparation for exams can be accomplished by self-study of the applicable current codes, commentaries, and related materials. Information regarding their purchase is covered on order forms in this pamphlet. An applicant may wish to contact commercial or vocational school bookstores, or the following book publishers, for textbooks which may serve as other self-study materials. As noted, several of the groups below offer training on their codes.

American Tech. Publ., Inc.  
1155 W. 175th St.  
Homewood, IL 60430  
Phone: 800-323-3471  
[www.americantech.org](http://www.americantech.org)

Craftsman Book Co.  
P O Box 6500  
Carlsbad, CA 92009  
Phone: 800-829-8123 Ext 66  
[www.craftsman-book.com](http://www.craftsman-book.com)

Goodheart Willcox  
123 W. Taft Dr.  
South Holland, IL 60473  
Phone: 800-323-0440  
[www.goodheartwillcox.com](http://www.goodheartwillcox.com)

Delmar Publishers  
Box 15-015  
Albany, NY 12212  
Phone: 800-347-7707  
[www.delmar.com](http://www.delmar.com)

Natl. Fire Protection Assoc.  
Batterymarch Park  
Quincy, MA 02269  
Phone: 800-344-3555  
[www.nfpa.org](http://www.nfpa.org)  
**Training also offered**

Intl. Code Council  
5203 Leesburg Pike, Suite 600  
Falls Church, VA 22041  
Phone: 703 931-4533  
[www.intlcode.org](http://www.intlcode.org)  
**Training also offered**

Intl. Assn. of Electrical Insp.  
901 Waterfall Way  
Richardson, TX 75080  
Phone: 800-786-4234  
[www.iaei.com](http://www.iaei.com)  
**Training also offered**

S&B occasionally offers preparatory training for prospective inspectors - check the S&B WebSite (<http://www.commerce.state.wi.us/SB/SB-DivContinuingEducation.html>) for information. Also, local vocational schools and the UW-Extension in Madison, 800-462-0876, and Milwaukee, 800-222-4643, may occasionally offer various code and inspector training courses. Some vocational schools offer an extended architectural or engineering technician program which could be appropriate preparation for a generalist code official.

Included in this pamphlet are sample exam questions for several of the certification categories.

**Exams:** Exams are offered each month in Black River Falls, Madison, Pewaukee, and Wausau. On each exam day, there are two exam periods, with a break between. All exams are three hours long. Examinees must be able to present a picture I.D. to verify their identity. They are required to bring a pencil, calculator, and current code books.

All exams are of the open-codebook type. Exam questions are multiple-choice and fill-in-the-circle type. Questions are based on the current codes, and on the accepted practices and terminology of the field (see sample questions). Only the applicable code books or Wisconsin state code commentaries may be used at the exams. A passing score of 70 percent is required in all categories.

All exam sites are accessible to people with disabilities. If someone needs additional exam accommodations, please contact S&B for a Request for Examination Accommodations form. S&B must receive the completed request forms at least 30 days prior to the desired exam date.

**Fees and Registration:** Fees per inspection category are a \$10 application fee, a \$20 exam or exam retake fee, and a \$15 pro-rated initial certification fee for two years. All fees are non-refundable, although fees may be applied towards rescheduled exams, up to one year later, if the examinee has given prior notice of non-attendance at a scheduled exam session.

Go to <http://www.commerce.state.wi.us/SB/SB-FormCredAppList.html> for inspector credential applications or contact the S&B Credentialing Unit, 608-261-8500, to receive application materials. Completed applications and fees must be received in the S&B office four weeks prior to the exam date. Confirmation letters will be sent several weeks prior to the exam.

**Exam Results and Retakes:** Exam results are mailed three weeks after the test date. People who pass an exam need to send in the pro-rated certification fee in order to receive a certification, valid to the second following June 30. Someone may retake any failed exam for an additional exam fee at a later regular exam date. Test scores are not released to other parties. An examinee may review their exam in Madison.

**Re-certification Requirements:** Inspectors need to renew their certification on July 1 every two years. The fee is \$15 per category. Inspectors will receive a renewal notice in May prior to the expiration date.

For the renewal of a certification for the first time, an inspector will **not** have any continuing education requirements. For subsequent renewals, most inspectors will need to complete approved continuing education requirements. For each category, except POWTS, an inspector must attend 12 hours of S&B-approved training during every two-year period. For the POWTS category, an inspector must attend six hours of approved continuing education every two years. Continuing education is earned in a two-year period from April 1 to March 31, at least three months before the June 30 certification expiration date.

## **SAMPLE EXAM QUESTIONS**

(Based on codes in effect 1/1/03)

### **UDC-CONSTRUCTION**

1. Which of the following types of regulations are within the scope of the Uniform Dwelling Code (UDC) and shall not be regulated by local ordinance:

- a. Building use limits
- b. Framing requirements
- c. Lot setback requirements
- d. Building size

Answer: b.      Reference: s. 20.02(1)(b)

2. Blown-in attic insulation shall have depth markers \_\_\_\_\_.

- a. installed every 500 sq ft
- b. facing the gable ends
- c. showing the initial and settled depth
- d. all of the above

Answer: c.      Reference: s. 22.03(2)

3. Using the Appendix Span Tables, what is the maximum span for 2" x 8" rafters that have an  $F_b$  value of 1,400 psi, a spacing of 16 inches o.c., a live load of 40 pounds psf and a dead load of 10 psf for light roof covering. (Ignore deflection criteria and assume a pitch of  $\leq 30$  degrees or 7:12)

- a. 12'11"
- b. 13'7"
- c. 14'0"
- d. 15'9"

Answer: b.      Reference: ss. 21.28, 21.01(3)(a)2., Code Appendix Tables R-3 or R-15

### **UDC-HVAC:**

1. The standard clearance to unprotected combustibles for a six inch chimney connector serving a solid fuel-burning appliance is \_\_\_\_\_ inches.

- a. 6
- b. 12
- c. 18
- d. 24

Answer: c.      Reference: s. 23.045(4)(b)

2. Misconduct by an inspector includes the following:

- a. An act which jeopardizes the interests of the public.
- b. Preparation of falsified reports.
- c. Failure to submit required reports.
- d. All of the above.

Answer: d.      Reference: s. 5.003(30)

3. If a dwelling has 150 cfm of exhaust ventilation, then it shall be provided with a minimum \_\_\_\_\_ cfm of makeup air.

- a. 55
- b. 60
- c. 150
- d. None of the above

Answer: b.      Reference: s. 23.02(3)(a)4.  $150 \text{ cfm} \times 40\% = 60 \text{ cfm}$

**UDC-ELECTRICAL:**

1. A raceway does not include \_\_\_\_\_.  
a. EMT  
b. NM cable  
c. rigid metal conduit  
d. rigid nonmetallic conduit

Answer: b. Reference: NEC Article 100

2. Which of the following locations does NOT require a lighting outlet?  
a. storage attic  
b. basement  
c. closet  
d. crawl space with equipment

Answer: c. Reference: NEC 210-70(a)

3. What is the maximum length of service raceway or cable that may extend into a dwelling?  
a. two feet  
b. four feet  
c. eight feet  
d. unlimited

Answer: c. Reference: NEC Article 230-70, s. 16.25(4)

**RENTAL WEATHERIZATION:**

1. What is the energy savings in one year for adding R-33 insulation to a 1400 square foot attic that is located in Zone 10 and has an existing total R-value of 7. Space heating fuel is natural gas.  
a. 57 therms  
b. 157 therms  
c. 548 therms  
d. 1,577 therms

Answer: c. Reference: Comm 67.06

$$ES = \frac{(U_i - U_f) \times A \times D \times 24}{K \times V}$$

$$ES = \frac{(0.143 - 0.025) \times 1,400 \times 7,673 \times 24}{0.55 \times 100,000} = 557 \text{ therms}$$

2. An inspector must submit the yellow copy of the Certificate of Compliance to the state within \_\_\_\_\_ business days following building certification.  
a. 3  
b. 15  
c. 30  
d. 90

Answer: b. Reference: s. 67.08(1) Rental Weatherization Code Commentary

3. If an attic has an existing insulation level of R-11, the property owner must add \_\_\_\_ to comply with the code.  
a. Nothing  
b. R-10  
c. R-19  
d. R-38

Answer: c. Reference: s. 67.05(1)(a), Table 67.05-A

Wisconsin Division of Safety & Buildings  
**SUPPLEMENTARY BUILDING CODE RELATED PUBLICATIONS ORDER FORM**  
 January 2004

These publications supplement the administrative codebooks. If you have questions regarding your order, contact Safety and Buildings Division, 608-267-4405, TDD/VOICE RELAY: 1-800-947-3529. For official Wisconsin codes only (not adopted model codes) contact state Document Sales at 800-362-7253. Also note that current copies of the official Wisconsin codes only (not adopted model codes) are available online, <http://www.legis.state.wi.us/rsb/code/>. The Safety and Buildings Division has additional information, <http://www.commerce.state.wi.us/SB/SB-DivCodes.html>.

**(All prices subject to change on January 1 of each year. Use bottom of form to order.)**

1. \$10.00 - **Commercial Plan Submittal Guide** - This includes the information and forms designer need in order to submit commercial building and heating plans to S&B. For commercial building codes, see the separate form for ordering an Enrolled Wisconsin Commercial Building Code, which combines the WCBC and the adopted provisions of the international model codes. For more information after you have the order form, contact Roberta Ward at [rward@commerce.state.wi.us](mailto:rward@commerce.state.wi.us), 608-266-8741.

Alternatively you can order the Wisconsin code and the model codes separately. For the International Building Code, International Mechanical Code, International Energy Conservation Code and International Fuel Gas Code, purchasing information is available at [www.intlcodes.org](http://www.intlcodes.org) or 800-214-4321. For the Wisconsin code, see the separate Document Sales order form for Comm 61-65 or contact Document Sales, 800-362-7253. Document Sales does not have the Enrolled Code or the International Codes.

2. \$20.00 – **Wisconsin Construction Codes Report subscription** - This is a 12 month subscription. The WCCR includes information of interest to designers, contractors and inspectors.
3. Free - Limit of 25 copies - **Commercial Plan Review Brochure** - Easy to read summary of the commercial plan review process for building owners and others.

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	TITLE	QUANTITY	PRICE	TOTAL
1.	Commercial Plan Submittal Guide	_____	\$10.00	_____
2.	Construction Codes Report Subscription	_____	\$20.00	_____
3.	Commercial Plan Review Brochure (25 max)	_____	Free	<u>-0-</u>
4.	2004 UDC Code Commentary (available March 2004)	_____	\$21.00	_____
5.	UDC Brochure (25 max)	_____	25 Free	<u>-0-</u>
	Additional copies 5¢ each-see note on reverse	_____	\$.05	_____
6.	Erosion Control Brochure and Plot Plan (25 max)	_____	Free	<u>-0-</u>
7.	Rental Weatherization Commentary	_____	\$ 5.00	_____
8.	Smoke Detector Brochure (25 max free)	_____	Free	<u>-0-</u>
	Additional copies 5¢ each	_____	\$ .05	_____
9.	Rental Weatherization Brochure (5 max free)	_____	Free	<u>-0-</u>
	Additional copies 5¢ each-see note on reverse	_____	\$.05	_____
10.	UDC Plumbing Inspector Training Packet - 4 manuals	_____	\$40.00	_____
11.	POWTS Inspector Training Packet - 3 manuals	_____	\$30.00	_____
12.	Inspector Certification Information Packet	_____	Free	<u>-0-</u>
<b>GRAND TOTAL Payable to Safety and Buildings Division</b>				_____

- DETACH, FILL OUT REVERSE SIDE AND ADDRESS INFORMATION BELOW, ENCLOSE CHECK WITH PROPER FEES, AND MAIL TO ADDRESS BELOW. The Safety and Buildings Division does not discriminate on the basis of disability in the provisions of services. If you need this printed material interpreted or in a different form or if you need assistance in using this service please contact us.  
Do not send official codebook orders to the Safety and Buildings Division. Send those to state Document Sales.

DIVISION OF SAFETY & BUILDINGS  
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SBD-10393 (R.01/04)

# Wisconsin Document Sales

## BUILDING-RELATED ADMINISTRATIVE CODEBOOKS ORDER FORM

January 2004

(Listed prices do not include state or county sales taxes and are subject to change each January 1.)

The following codebooks are available from the **Document Sales Unit** for the indicated prices. All codes are 8-1/2"x11"size. If you desire to receive any supplemental codebook pages that may come out in the next twelve months, you must order the subscription upkeep service for an additional cost equal to the codebook price. Special double lock post binders for the codebooks are available below. Also note that current copies of the official Wisconsin codes (but not adopted national model codes) are available by Internet connection at <http://www.legis.state.wi.us/rsb/code/>.

**TO ORDER:** Complete both sides of the order blank. Include either your Visa/Mastercard number with signature and expiration date, or a check or money order made out to Department of Administration. Orders by phone are accepted when purchasing with a credit card. To place orders, call 1-800-362-7253. For general information on official Wisconsin code purchases, call 608-266-3358. Do not call the Safety and Buildings Division.

1. \$32.00 Wisconsin Commercial Building Code, Chs. Comm 61-65.). Covers commercial buildings built since October 1914. Needs to be supplemented with certain 2000 International Model Codes. See the separate form for the Enrolled Wisconsin Commercial Building Code, which combines the WCBC and the adopted provisions of the international model codes. For more information after you have that Enrolled Code order form, contact Roberta Ward at [rward@commerce.state.wi.us](mailto:rward@commerce.state.wi.us), 608-266-8741. Document Sales does not handle the Enrolled Code.

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	STK #	ITEM	TITLE	TYPE	QUANTITY	PRICE	TOTAL
1.	129	CB	Commercial Building Code Comm 61-65 eff. 7/1/02	Book 1 yr Upkeep	_____ _____	\$32.00 \$32.00	_____ _____
2.	152	EZ	Existing Buildings Code Comm 75-	Book 1 yr Upkeep	_____ _____	\$ 9.00 \$ 9.00	_____ _____
3.	170	HB	Historic Building Code Comm 70	Book 1 yr Upkeep	_____ _____	\$ 9.00 \$ 9.00	_____ _____
4.	140	UD	Uniform Dwelling Code Comm 20-25 and Appendix	Book 1 yr Upkeep	_____ _____	\$21.00 \$21.00	_____ _____
5.	10	SD	Smoke Detector Code Comm 28	Book 1 yr Upkeep	_____ _____	\$ 9.00 \$ 9.00	_____ _____
6.	119	JM	Wis. Electrical Code - Vol II Comm 16	Book 1 yr Upkeep	_____ _____	\$ 9.00 \$ 9.00	_____ _____
7.	127	PL	Wis. Uniform Plumbing Code Comm 81-87	Book 1 yr Upkeep	_____ _____	\$32.00 \$32.00	_____ _____
8.	204	CD	Credentials Code Comm 5	Book 1 yr Upkeep	_____ _____	\$ 9.00 \$ 9.00	_____ _____
9.	126	RU	Rental Unit Engy Effic Stds Comm 67	Book 1 yr Upkeep	_____ _____	\$ 9.00 \$ 9.00	_____ _____
10.	1700	--	Wis. Constr. Site Best Mgmt. Practices Handbook	Book	_____	\$ 6.30	_____
11.	10708	D	Private Sewage Components Manual Set	Books	_____	\$89.10	_____

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5% State Sales Tax

(if applicable) 1/2% County Sales Tax

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